EXHIBIT



Exhibit No.: _____
Issue(s): Select Differences between Applications and Stipulations/ Compact Fluorescent Lighting (CFL)/ Public Buildings
Witness/Type of Exhibit: Marke/Supplemental Rebuttal
Sponsoring Party: Public Counsel
Case No.: EO-2015-0055

# SUPPLEMENTAL REBUTTAL TESTIMONY

# OF

# GEOFF MARKE

Submitted on Behalf of
the Office of the Public Counsel

**UNION ELECTRIC COMPANY D/B/A
AMEREN MISSOURI'S**

**Case No. EO-2015-0055**

July 15, 2015

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of Union Electric Company d/b/a Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as allowed by MEEIA | ) ) ) ) ) | EO-2015-0055 |

**AFFIDAVIT OF GEOFF MARKE**

STATE OF MISSOURI )
) ss
COUNTY OF COLE )

Geoff Marke, of lawful age and being first duly sworn, deposes and states:

1. My name is Geoff Marke. I am a Regulatory Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my supplemental rebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached affidavit are true and correct to the best of my knowledge and belief.

Geoff Marke

Subscribed and sworn to me this 15th day of July 2015.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

JERENE A. BUCKMAN
My Commission Expires
August 23, 2017
Cole County
Commission #13754037

Jerene A. Buckman
Notary Public

My commission expires August 23, 2017.

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SUPPLEMENTAL REBUTTAL TESTIMONY

OF

GEOFF MARKE

UNION ELECTRIC COMPANY

d/b/a Ameren Missouri

CASE NO. EO-2015-0055

# I. INTRODUCTION

**Q. Please state your name, title and business address.**

A. Dr. Geoffrey Marke, Economist, Office of the Public Counsel (OPC or Public Counsel), P.O. Box 2230, Jefferson City, Missouri 65102.

**Q. Are you the same Dr. Marke that filed rebuttal, surrebuttal, and supplemental direct testimony in EO-2015-0055?**

A. I am.

**Q. What is the purpose of your supplemental rebuttal testimony?**

A. The purpose of my supplemental rebuttal testimony is to address portions of Ameren Missouri witnesses Dan Laurent and William R. Davis' supplemental testimonies and portions of the utility non-unanimous Stipulation and Agreement recently filed including:

- Select differences between applications and filed Stipulations regarding:
  - Program Costs and Savings Target
  - Throughput Mechanism
  - Performance Incentive
  - Program Evaluation
- Inclusion of compact fluorescent lighting (CFLs) and deemed estimates and
- Inclusion of public buildings and the stated omission of a free ridership estimate

**Q. Has Public Counsel's position changed since the Office submitted supplemental direct testimony?**

A. It has not. However, OPC would like to point out an inconsistency between both Ameren's previously filed testimony and its Stipulation regarding the Small Business Direct Install (SBDI) program, as well as one contextual clarification of my supplemental direct testimony.

**Q. Please continue.**

A. As stated in my supplemental direct testimony, the SBDI program has a total resource cost test (TRC) score of 1.29 based on data provided by Ameren Missouri. The program is now proposed in both the utility and non-utility Stipulations.

Ameren Missouri witness Rick Voytas filed surrebuttal testimony which stated the SBDI program was excluded from the Ameren's original Cycle II application because it was not cost-effective with a TRC score of 0.64. It is not clear what analytic adjustments the Company made between the filing of surrebuttal testimony and the filing of the non-unanimous utility Stipulation that caused the program to more than double in its cost-effectiveness score (0.64 to 1.29). OPC has issued a data request to the Company to explain this adjustment, but given the current time constraints the issue may need to be addressed during the hearing.

Regarding the contextual clarification, in my supplemental direct testimony on page 10 lines 15-17, I state the following:

> Work on Ameren Missouri's market potential study began in 2012 and was completed at the end of 2013. In a general sense, the study utilized historical data, primary data collected in 2013, and proprietary data from a subcontractor.

Ameren hired the market potential study evaluator, Enernoc (now Applied Energy Group), to work on the study in 2012. The market potential study utilized: 1) Ameren Missouri-specific data from 2011 as the baseline year, 2) primary data collected in 2012-2013, 3) secondary data, and 4) proprietary data from a subcontractor (YouGov) collected in 2010, as the basis for projected take-rate adjustment estimates for programs in 2016 to 2018.

## II. Select Differences between Applications and Stipulations

### Program Costs and Target

**Q. Please provide a comparison of the proposed program costs and savings target filed to date.**

A. Table 1 provides a breakdown of all proposed program costs and savings target associated with an Ameren MEEIA application to date.

Table 1: Proposed program costs and savings target in Cycle I and Cycle II

| | Program Costs | MEEIA Savings |
|---|---|---|
| **MEEIA Cycle I** | | |
| Ameren Cycle I Approved (2013-15)[1] | $145million | 793,102 MWh |
| Ameren Cycle I to Actual Date (2013 & 14)[2] | $76m | 692,086 |
| **MEEIA Cycle II** | | |
| Ameren Potential Study RAP (2016-18)[3] | $187m | 539,000 |
| Ameren Cycle II Application[4] | $134m | 426,382 |
| Utility Stipulation[5] | $197m | 583,563 |
| Non-Utility Stipulation[6] | $148m | 121.1 MW (459,400 MWh) |

[1] EO-2012-0142 Ameren Missouri's Filing to Implement Regulatory Changes Furtherance of Energy Efficiencyas Allowed by MEEIA ("Cycle I")
[2] EO-2015-0210 Ameren Missouri's Demand-Side Program Annual Report for 2014
[3] EO-2015-0084 Ameren Missouri's 2014 Utility Resource Filing pursuant to 4 CSR 240 - Chapter 22
[4] EO-2015-0055 Ameren Missouri's 2nd Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA ("Cycle II")
[5] EO-2015-0055 Non-Unanimous Stipulation and Agreement. Item No. 100. ("utility stipulation")

Table 1 includes six combined program cost and savings target estimates that have been filed to date. For purposes of this testimony, OPC suggests that there are three relevant observations to be considered from this table including: 1) the historical evidence to date, 2) Ameren Missouri's three proposed estimates for Cycle II, and 3) the difference between the two non-unanimous Stipulations.

**Q. What does the historical evidence to date suggest regarding program costs relative to savings achieved?**

A. It suggests that Ameren Missouri has been extraordinarily successful at energy efficiency and/or the savings target was set too low and the budget set too high in Cycle I. According to the data in table 1, in just two years Ameren Missouri has achieved 87% of their Cycle I savings target with only 52% of its allocated budget.

If the average of PY2013 and PY2014 is used to estimate projected savings and budgets for PY2015, Ameren Missouri will have achieved 1,038,129 MWh in energy savings (131% of savings target) at only $114 million in total budget (73% of available budget).

| | **Program Costs** | **MEEIA Savings** |
|---|---|---|
| Ameren Cycle I Approved (2013-15) | $145million (100%) | 793,102 MWh (100%) |
| Ameren Cycle I to Actual to Date (2013 & 14) | $76m (52%) | 692,086 (87%) |
| Projected Three-Year Estimate = | $114m (73%) | 1,038,129 (131%) |

**Q. Is past performance indicative of future performance?**

A. No, but it should not be dismissed either.

[6] EO-2015-0055 Amended Non-Unanimous Stipulation and Agreement Regarding Ameren Missouri's MEEIA Cycle 2. item No. 119 ("non-utility stipulation")

**Q. Ameren Missouri has filed three separate savings targets and budgets to date for 2016-2018. What were the dates and results of those filed submissions?**

A. The three separate savings targets, budgets and dates filed include:

| | | |
|---|---|---|
| 1. Market Potential Study (2016-18) | **Program Costs** | **MEEIA Savings** |
| October 1, 2014 | $187m | 539,000 |
| 2. MEEIA Cycle II Application | **Program Costs** | **MEEIA Savings** |
| December 22, 2014 | $134m | 426,382 |
| 3. Utility Stipulation | **Program Costs** | **MEEIA Savings** |
| June 30, 2015 | $197m | 583,563 |

**Q. Were the market potential study results contested?**

A. Yes, they have been formally contested in EO-2015-0084 (and again in this case) and the results and methodology were contested informally by stakeholders throughout its development in 2012-2013.[7]

The finalized results of the market potential study coincided with the first-year results of Ameren Missouri's MEEIA Cycle I in early 2014. Beyond the methodological issues referenced throughout OPC's submitted testimony, stakeholders took issue with the considerable reduction in "achievable" savings and the considerable increase in program costs relative to the results of PY2013. Savings for PY2013 alone would have accounted for 63% of the market potential's three-year estimates.

[7] See EO-2015-0055 Rick Voytas Surrebuttal Schedule RAV-2.

| | Program Costs | MEEIA Savings |
|---|---|---|
| Potential Study RAP (2016-18) | $187 million | 539,000 MWh |
| PY2013 (% relative to Cycle II RAP) | $34 m (18%) | 337,368 (63%) |

After the market potential study was finalized in early 2014, stakeholders would have to wait ten months before it was filed in Ameren Missouri's triennial IRP, EO-2015-0084, to address the accuracy of the market potential study results in a case before the Commission. It would be another two months before the market potential study would be utilized in a MEEIA application, this case.

**Q. Please explain the inclusion of the other two savings target estimates?**

Approximately one year (Dec 22. 2014) after the market potential study was finalized, Ameren Missouri submitted its second MEEIA application which reduced the overall savings target 21% compared to the market potential study results.

Six months after its application (June 30, 2014), Ameren submitted a "black box" stipulation that essentially brought Ameren Missouri's target and program costs in line with the aforementioned market potential achievable estimates.

| | Program Costs | MEEIA Savings |
|---|---|---|
| Potential Study RAP (2016-18) | $187 million | 539,000 MWh |
| MEEIA Cycle II Application | $134m | 426,382 |

**Q. Please summarize your conclusion.**

A. Ameren Missouri produced a market potential study estimate for 2016-2018 based on an artificially downward adjustment by unsubstantiated proprietary data. The Company then proposed an application that further reduced savings targets by 21%. In two rounds of submitted testimony multiple parties concluded that Ameren Missouri's savings target was

artificially low. Finally, after postponing the evidentiary hearing, the Company waited until the "zero" hour to enter into a non-unanimous Stipulation where it "conceded" to move back essentially to its original artificially downward adjusted savings target position set forth in its market potential study.

| | **Program Costs** | **MEEIA Savings** |
|---|---|---|
| Potential Study RAP (2016-18) | $187 million | 539,000 MWh |
| Utility Stipulation | $197 m (+5%) | 583,563 (+8%) |

**Q. Is there anything else that should be considered when comparing the market potential study results with the utility stipulation?**

A. Yes, readers should be aware that MWh savings and the activity associated with the savings in the market potential study are confined only to the program years 2016-2018. This is not the case in the utility Stipulation. Ameren Missouri is not proposing to start 2016 at "zero." It plans to include savings already "baked-in" to the achievable potential from Cycle I. The consequence is that Ameren Missouri is not increasing its savings target as much as it appears at first glance.

For Cycle II, Ameren Missouri is requesting to transfer some of the savings associated with program expenditures from its commercial and industrial customers in Cycle I to Cycle II. However, Ameren Missouri is proposing to leave costs associated with that transfer in Cycle I. This makes the proposed utility stipulation savings estimate a misleading target.

**Q. Please explain.**

A. It is not uncommon for large commercial and industrial (C&I) energy efficiency projects to take many months to complete. This raises a continuity issue if a project's completion overlaps a MEEIA cycle's timeframe. For example, Company A may commit to a project in November of 2015 based on rebates available in Cycle I but the project may not be fully

completed until June of 2016, five months after Cycle I has concluded. In the above example, Ameren Missouri is proposing to allocate those program costs to Cycle I and the program savings to Cycle II.

The net result is that Ameren Missouri would start Cycle II with a sizable amount of its much smaller savings target having already been met. As will be explained later, this is especially disconcerting given that Ameren Missouri is proposing both a much larger net shared benefit amount as well as a 60% increase in the performance incentive.

**Q. What are the main differences in savings and costs between the utility Stipulation and the non-utility Stipulation?**

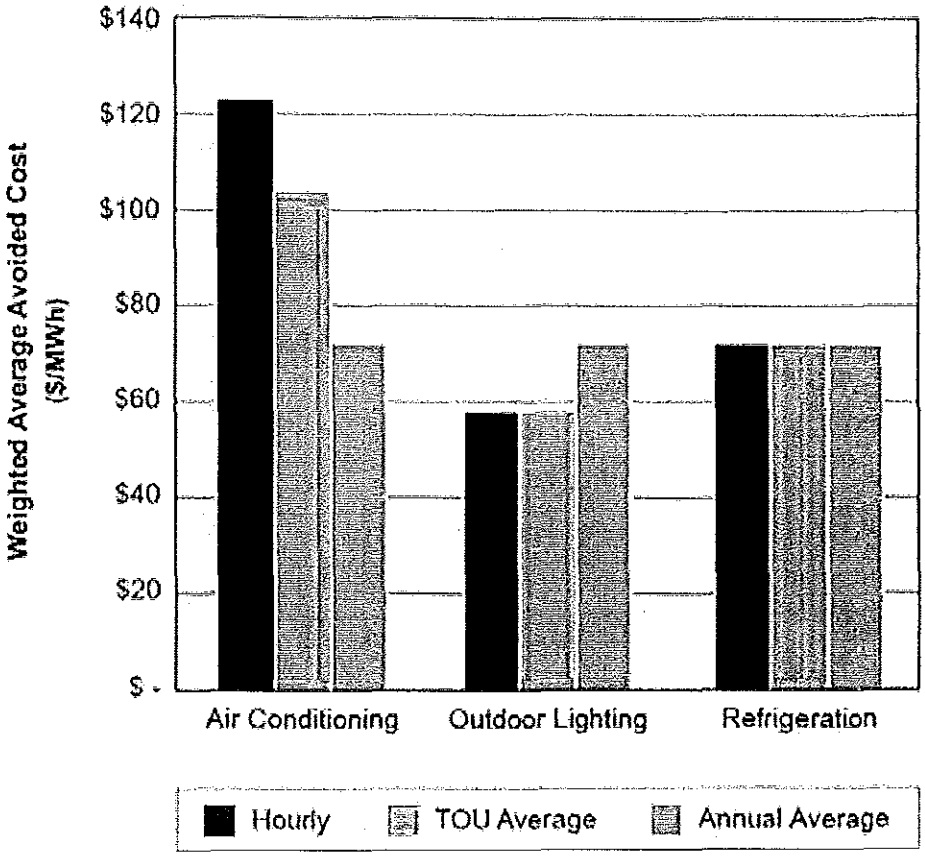
A. The non-utility Stipulation's program costs and savings are based on Ameren Missouri's filed calculations. Signatories to the non-utility stipulation adopted two of the programs included in the utility Stipulation and rejected the rest of the programs. Consequently, the non-utility Stipulation has programs costs approximately $50 million dollars less than the utility Stipulation. While the utility Stipulation includes a savings target measured in energy savings (MWh), the non-utility Stipulation includes a demand savings target (MW).

| | **Program Costs** | **MEEIA Savings** |
|---|---|---|
| Utility Stipulation | $197m | 583,563 |
| Non-Utility Stipulation | $148m | 121.1 MW (459,400 MWh) |

Including a demand savings target will incent the Company to reduce future capacity needs. In contrast, the utility Stipulation proposes to ignore demand savings entirely. A demand savings target is preferable to an energy savings target because the financial and environmental savings associated with reductions in peak demand will be realized for all ratepayers regardless of whether or not they are active participants in Ameren Missouri's MEEIA programs. For example, a measure that reduced energy mostly at night is not as

valuable as one that reduced energy mostly during summer afternoons as shown in Figure 1 below.

Figure 1: Consideration of Time-Differentiation in Energy Savings across a sample of measures[8]




High efficiency HVAC systems (that produce large demand savings) have a higher value when hourly savings and costs are considered, because usage is higher when avoided costs are higher. In contrast, outdoor lighting has an overall lower value when hourly savings and costs are considered, because that usage is typically off-peak.

[8] U.S. Environmental Protection Agency and U.S. Department of Energy (2006). National Action Plan for Energy Efficiency. www.epa.gov/cleanenergy/documents/suca/napee_report.pdf.

**Q. Does the non-utility Stipulation provide for an energy savings (MWh) target?**

A. Yes, as explained in OPCs supplemental direct testimony, the non-utility stipulation has proposed an additional mechanism to value energy savings in Cycle II. Utilizing a third-party mediator process to reconcile differences over potential energy savings estimates the non-utility Stipulation provides for the Commission to allow an additional performance incentive to reward the Company for superior performance.

**Throughput Mechanism**

**Q. Please provide a comparison of the proposed throughput mechanisms to date.**

A. Table 2 provides a breakdown of all proposed throughput mechanisms to date.

Table 2: Proposed throughput mechanisms

| | **Savings Estimate** | **Utility Share** |
|---|---|---|
| Ameren Cycle I Application | Deemed pre-cycle "locked-in" | 26.34% |
| Ameren Cycle II Application | Deemed pre-cycle "locked-in" | 32.57% |
| Utility Stipulation | Deemed pre-cycle "locked-in" | Between 27.68 to 35.60% |
| Non-Utility Stipulation | Unbilled revenue tracked on a monthly basis—trued up based on EM&V and NTG adjustments | As incurred, subject to cap and floor |

Table 2 includes four throughput mechanisms that have been filed to date. The Commission should be cognizant of two points above—the historical impact of deemed pre-cycle "locked-in" savings estimates, and the Company's efforts to increase its share of the net benefits compared against the dramatically reduced energy savings target.

**Q. Please continue.**

A. Regarding the savings estimate, the utility stipulation calls for each measure to have a pre-assigned energy savings estimate assigned to it which will represent its deemed value. Those deemed estimates will remain untouched throughout the next three years. OPC is opposed to this deemed approach and points to Cycle I and the large differences observed between what actually occurred as discovered in the EM&V process and a deemed gross approach. That is to say, experience tells us this approach is so unrelated to actual savings that it is unworkable going forward. Based on the evaluator's EM&V reports for PY2013 and PY2014 and Ameren Missouri's Demand-Side Program Annual Report for 2014 filed in EO-2015-0210 the following differences can be observed:

| | |
|---|---|
| Deemed estimate for PY2013 & PY2014 | $325,918,210 |
| EM&V estimate for PY2013 & PY2014 | $290,434,948 |
| Difference between estimates | $35,483,262 |
| Additional throughput recovery[9] = | $9,346,291 |

If carried forward, the problems inherent in this approach are exacerbated under the utility Stipulation which calls for an increase in the net-shared benefit percentage. Applying experience from Cycle I to the high end of the utility's Stipulation would yield $12,632,041 in additional adjusted throughput disincentive recovery for the Company.[10] Keep in mind that this increase in the "sharing" percentage benefit for the Company, combined with deemed values, and a significantly reduced energy savings target for ratepayers in Cycle II, all but ensures the utility over-recovers on its throughput disincentive moving forward.

In contrast, the non-utility Stipulation DSIM mechanism represents a fundamentally different approach which follows the law and penalizes neither the Company nor the ratepayer. Details

[9] Cycle I application: 26.34% of $35,483,262 = $9,346,291
[10] Cycle II utility stipulation: 35.60% of $35,483,262 = $12,632,041

of this mechanism were articulated in the supplemental direct testimony of Staff witness Sarah Kliethermes.

As an aside, the utility's proposed net shared benefit mechanism continues to omit the utility performance incentive as a realized cost borne by ratepayers. This is hardly a trivial issue as the utility stipulation now calls for a *60% increase* in the performance incentive compared to what the Company received in Cycle I which had a much higher savings target.

**Performance Incentive**

**Q. Please provide a comparison of the Company's proposed performance incentives to date.**

A. Table 3 provides a breakdown of the Company's proposed performance incentives to date.

Table 3: Company proposed performance incentives

| | 70% (of goal) | 100% of goal | >130% | Difference from Cycle I |
|---|---|---|---|---|
| Ameren Cycle I Approved | 4.60% $12million | 5.03% $18.75m | 6.19 $30m | |
| Ameren Cycle II Application | 12.80% $16m | 14.00% $25m | 17.20% $40m | 33.3% increase |
| Utility Stipulation | 12.52% $19.2m | 13.70% $30m | 16.86% $48m | 60% increase |

As table 3 shows, Ameren Missouri has increased the requested overall performance incentive considerably since its Cycle I application.

It is also important to note that each of the proposals above would reward the Company for achieving less than the targeted savings. Additionally, these proposals fail to include the performance incentive as a cost in the net shared benefit calculation. Excluding a cost that

would likely exceed $48 million in Cycle II and be recovered from ratepayers through the MEEIA surcharge is unreasonable. Finally, these proposals fail to factor in demand savings as part of any target or recovery mechanism.

Taken as a whole, the Commission should note that the Company's "concession" to raise energy savings to the level that its flawed market potential study is appropriate is tied to:

1. "Baked-in" savings from activity done in Cycle I.
2. An increased sharing percentage of the TD-NSB.
3. A 60% increase in the performance incentive.

**Q. How does the non-utility Stipulation proposed performance incentive differ?**

A. The non-utility Stipulation is designed to reward the Company with a performance incentive using as a proxy the present value of the earnings opportunity on capacity-related investments that it would receive if Ameren Missouri did not promote DSM programs.

As explained earlier, this will incent the Company to pursue programs that will benefit all customers. Moreover, any performance incentive would not be realized for subpar efforts at the 70% level. The non-utility Stipulation begins incentivizing the company at the 100% savings target of 121.1 MW based on the results of a full EM&V to reflect what actually occurred.

In addition to the demand-related performance incentive, and as articulated in my supplemental direct testimony, a multifamily low-income (MFLI) customer performance incentive has been added. If the Company meets the budgeted amount for the program it will receive an additional half a million dollars in a bonus monetary incentive in recognition of the spilt incentive and the Company's indifference in where savings are ultimately achieved.

Finally, the non-utility Stipulation includes a possible incentive based on the identification of additional savings by a third-party mediator process. This potential incentive can further

encourage the Company to aggressively deploy what should be least-cost resources for PY2017 and PY2018.

**Program Evaluation**

**Q. Please provide a comparison of the proposed program evaluations to date.**

A. Table 4 provides a breakdown of all proposed program evaluations to date.

Table 4: Proposed program evaluations

| | **TD-NSB** | **Performance Incentive** |
|---|---|---|
| Ameren Cycle I Approved | Deemed pre-Cycle I | Full EM&V |
| Ameren Cycle II Application | Deemed pre-Cycle II | NTG Deemed at 1.0 |
| Utility Stipulation | Deemed pre-Cycle II | Conditional EM&V: NTG 0.9 to 1.1 = 1.0 |
| Non-Utility Stipulation | Full EM&V | Full EM&V |

**Q. Please explain Ameren Missouri's program evaluation performance incentive proposal.**

A. According to Ameren Missouri witness William R. Davis:

> The Stipulation adopts the approach reflected in the agreement resolving the first program year results from the Company's MEEIA 1 energy efficiency programs. This agreement results in a deemed net-to-gross of 1.0 for a given program year if both the Company's evaluation contractor and the Commission's auditor portfolio-wide average energy savings fall within a net-to-gross range of 0.9 to 1.1.[11]

For example, following an annual EM&V, if the Company's evaluator estimates a NTG of 0.94 and the Commissions auditor estimates a NTG of 1.09. Then the results fell within the

[11] EO-2015-0055 Supplemental Testimony of William R. Davis p. 11, 1-7.

proposed range and the NTG will be deemed at 1.0. If either estimate falls outside the range than the issue can be contested.

**Q. Does Public Counsel support this position?**

A. No. The non-utility stipulation specifically calls for a full retrospective EM&V to attribute accurate savings incurred by the Company. Although stakeholders may have disagreements regarding the results of a given program in a given year, despite what the Company may have the Commission believe, the results of the EM&V process generally have not been contentious. In fact, to date, only one program's results in one year have been challenged by a stakeholder. The unique situation surrounding that program is not likely to occur again, nor should it be held as the sole reason to minimize both the EM&V process and the role of the Commission's independent auditor. In practice, the Company's proposal increases the likelihood that the deemed values would be used throughout the entire cycle. Even the flawed Cycle I performance incentive was not so generous.[12]

## III. Compact Fluorescent Lighting (CFL)

**Q. Please explain what Ameren Missouri is proposing in the utility Stipulation regarding CFLs.**

A. The company is proposing to add over a million CFLs to the portfolio and to deem the savings with a NTG of 1.0 and an hour-of-use at 2.2. According to the supplemental direct testimony of Ameren Missouri witness Dan Laurent:

> A maximum of 1,150,000 CFLs would be incentivized and the proposed energy savings would amount to 27,722 MWh.

[12] The Company's proposal seeks to make permanent an agreement, resulting from extensive negotiations and interdependent concessions by the parties, to resolve an isolated change request case with specific context of the Stipulation as it pertains to the Cycle I portfolio. Full EM&V should not default to this sliding scale proposal nor has the Company provided any reason that the EM&V process should be limited in this way.

The continuation of the CFL program recognizes that there are still low-priced, incandescent bulbs available that our customers for purchase [*sic*] and will incentivize customers to purchase CFLs instead of less-efficient, incandescent bulbs.[13]

**Q. Does OPC support the inclusion of CFLs into Cycle II?**

A. No, this is an unacceptable and inappropriate inclusion. Both OPC *and the Company* have offered considerable testimony regarding the proliferation of CFLs into Ameren Missouri's marketplace, both in EO-2012-0142 and again in this case.[14] Although OPC and Ameren Missouri may disagree on the underlying causes and attribution, both have agreed that the promotion of CFL measures is inappropriate. The Company did not suggest a continuation of CFLs in its own Cycle I application.

Ameren Missouri's most recent residential lighting EM&V report, which includes the results of the service territories shelf study reprinted here for reference in table 5, also supports the position that promoting CFL measures is inappropriate based on primary data from Ameren Missouri's service territory.

Table 5: 2014 Percent of Stores with a Minimum of 10 Incandescent Bulbs: Comparison with Concurrent Midwestern Utility EISA Shelf Study

| Measure | Q1* | | Q2 | | Q3 | | Q4 | |
|---|---|---|---|---|---|---|---|---|
| | Ameren | Other | Ameren | Other | Ameren | Other | Ameren | Other |
| 100W Equivalent CFL | 10% | 10% | 11% | 2% | 2% | 3% | 4% | 1% |
| 75W Equivalent CFL | 19% | 19% | 21% | 2% | 5% | 3% | 4% | 4% |
| 60W Equivalent CFL | 77% | 77% | 71% | 61% | 59% | 50% | 51% | 34% |
| 40W Equivalent CFL | 66% | 66% | 65% | 56% | 41% | 20% | 44% | 15% |
| 60W Equivalent LED** | 3% | n/a | 3% | n/a | 12% | n/a | 26% | n/a |

*Q1 values borrowed from comparable mid-west utility program conducting a similar study.
**Q1 LED value uses the Q2 LED value

[13] EO-2015-0055 Supplemental Direct Testimony of Dan Laurent p. 6, 6-10.
[14] See EO-2015 Surrebuttal Testimony of Geoff Marke p. 23-27 & Surrebuttal Testimony of Rick Voytas p. 102 – 121.

The report shows that each quarter of 2014, a decrease of roughly 10% in the available shelf space for incandescent light bulbs. This is roughly one year after EISA standards have gone into effect. Under the utility's Stipulation an additional year (2015) will have passed where, if any incandescent light bulbs were purchased—they were not being replaced on the shelf by other incandescent light bulbs. At best, Table 5 suggests that if CFLs were included they should have a NTG of 0.5. Even then, this would be problematic as the Company and its third-party evaluator have claimed market transformation of the Ameren Missouri service territory for both PY2013 and PY2014.

**Q. Please explain.**

A. If you accept the premise of Ameren Missouri's purported accomplishments in Cycle I then you cannot include CFLs in Cycle II—because the market has been transformed. That is, Ameren Missouri believes that their service territory has been fundamentally altered due to their activity and that lighting vendors essentially no longer carry incandescent light bulbs. As the Commission's independent auditor states in its PY2014 report:

> The current calculations for lighting market effects and spillover assume that residential efficient bulb saturation increased by approximately 11 percent (Lighting Program Report, 2014, p. 4). This would place Ameren Missouri above states such as California and Massachusetts in terms of efficient lighting bulb saturation, an assumption that would need to be verified with field data collection before savings could be claimed for these impacts.[15]

Although some parties may disagree that Ameren Missouri could have caused the market for CFLs to transform so greatly as to exceed the #1 and #2 states in ACEEE's energy efficient ranking in efficient lighting saturation after only two years of activity, it is clear that the Company has been generously rewarded for CFLs to date in Cycle I. To continue to rebate

[15] EO-2014-0142. Johnson Consulting Group (2015) Final Annual Report on Evaluation Measurement & Verification Findings for Ameren Missouri Program Year 2014. P. 70

CFLs at the expense of more efficient and cost-effective technology, such as LEDs would be inappropriate.

The Company in its initial application and in surrebuttal recognizes that including a CFL program is inappropriate. Moreover, Ameren Missouri's EM&V contractor (Cadmus), its market potential study contractor (AEG), and the Commission's independent auditor (Johnson Consulting) have filed reports supporting this conclusion. Ameren Missouri's movement away from its well-supported original position is nothing more than a concession to appease signatories to the utility Stipulation, will spend ratepayer money for little to no energy efficiency benefit, is not supported by the record and should be disregarded.

## IV. Public Buildings

**Q. Please explain what Ameren Missouri is proposing in the Stipulation regarding public buildings.**

A. According to the utility Stipulation:

> The Signatories agree that public facilities (state and federal) are eligible for program participation, and agree that executive orders or statutes that target, require, or mandate a defined reduction of energy for a public facility shall not be used to classify a project associated with a public facility as a "Free Rider." The target energy savings for public facilities will equal 25,000 MWh. The target budget for public facilities will equal $7.3 million.[16]

**Q. Does OPC support the inclusion of public buildings savings into Cycle II?**

A. No, in short, if state and federal buildings are mandated to increase the energy efficiency of their buildings, then these buildings energy efficiency will increase regardless of whether or not Ameren Missouri offers financial assistance. This sentiment is also consistent with

[16] EO-2015-0055 Non-Unanimous Stipulation and Agreement item No. 100. p. 8

Ameren Missouri's Rick Voytas' surrebuttal testimony on pages 94-97. Again, the ratepayer would be compensating and rewarding the utility for efforts that would happen absent the program being in place. This is the definition of a free rider and why it is important to have a compentent EM&V and auditing process to ensure ratepayer funds are spent prudently. The utility and stakeholders efforts would be better served by focusing on those ratepayers who are not currently participating in energy efficiency programs.

**Q. Does this conclude your testimony?**

A. Yes.